

REMARKS

Claims 1-27 are pending. Claims 3-7, 15, 16, 18, and 20 have been objected to. Claims 3, 11, and 24 have been cancelled. Claim 27 has been added.

Responsive to the Examiner's objection to dependent Claims 15 and 18, Applicant has converted dependent Claims 15 and 18 into independent form by incorporating all the limitations of the claims from which they respectively depended. Applicants respectfully submit that amended independent Claims 15 and 18 are now in condition for allowance.

The Examiner rejected Claims 1, 2, 8, and 9 under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,171,076 to Gannaway ("Gannaway '076") in view of U.S. Patent No. 4,172,465 to Dashner ("Dashner '465") and further in view of U.S. Patent No. 1,886,205 to Lyford ("Lyford '205").

Responsive to the Examiner's rejection, dependent Claim 3, which the Examiner indicated would be allowable, has been cancelled and independent Claim 1 has been amended to incorporate the limitations previously set forth in cancelled dependent Claim 3. Applicants respectfully submit that amended independent Claim 1, as well as Claims 2 and 4-9 which depend therefrom, are now in condition for allowance.

The Examiner rejected Claims 10, 12-14, 17, 19, and 21 under 35 U.S.C. §103(a) as being obvious over Gannaway '076 in view of Dashner '465. The examiner rejected Claim 11 under 35 U.S.C. §103(a) as being obvious over Gannaway '076 in view of Dashner '465 in further view of Lyford '205. In response to the Examiner's rejection of Claims 10 and 11, dependent Claim 11 has been cancelled and the limitations of dependent Claim 11 have been incorporated into amended independent Claim 10.

Applicants respectfully submit that amended independent Claim 10 is not obvious over Gannaway '076 in view of Dashner '465. Amended independent Claim 10 requires, *inter alia*, a discharge valve member having a valve head, a spring biasing section, and a valve support, wherein said valve head, said biasing section, and said valve support are portions of a single integrally formed part. Neither Gannaway '076 nor Dashner '465 discloses a spring biasing section that is integral with the valve head and valve support. Dashner '465 discloses a biasing spring 46 independent of valve head 34. Similarly, Gannaway '076 discloses a compression spring 196 independent of valve head 194. Furthermore, nothing in the references provides a

motivation to combine the integral construction of the valve head of Lyford '205 with the complex valve design of Dashner '564 and Gannaway '076.

In addition to requiring an integral discharge valve member, amended independent Claim 10 requires, *inter alia*, a guide member engageable with the spring biasing section. Biasing spring 46 of Dashner '465 is not engageable with support element 32. Moreover, incorporating support element 32 and biasing spring 46 of Dashner '465 with poppet shaft 200 of Gannaway '076 would not meet this limitation. Dashner '465 would have an interior support element 32, inside the incorporated poppet shaft 200 of Gannaway '076, but it would still be poppet shaft 200 engaging biasing spring 46.

Advantageously, the integration of the spring biasing section with the valve head and valve support, as in amended independent Claim 10, prevents the need for the poppet shaft 200 of Gannaway '076 or the sleeve portion 40 of Dashner '076. By eliminating these features, the overall weight of the discharge valve member is reduced, which lessens impact fatigue. Moreover, the use of an integral valve head, spring biasing section, and valve support eliminates the linear rotation of the valve about its center, a common problem in the art as evinced by the disclosure in Dasher '465 (col. 5, lines 11-20).

For the foregoing reasons, Applicants respectfully submit that amended independent Claim 10, as well as Claims 12-14, 17, 19, and 21 which depend therefrom, are not obvious over Gannaway '465 in view of Dashner '076.

The Examiner rejected Claims 22-26 under 35 U.S.C. §103(a) as being obvious over Gannaway '076 in view of Dashner '465 and further in view of Lyford '205. Dependent Claim 24 has been cancelled and the limitations of dependent Claim 24 have been added to amended independent Claim 22. Amended independent Claim 22 requires, *inter alia*, a discharge valve member having a valve head, a biasing section, and a valve support, wherein said valve head, said biasing section, and said valve support are portions of a single integrally formed part. For the reasons discussed previously with regards to amended independent Claim 10, Gannaway '076, Dashner '465, and Lyford '205 do not disclose a valve head, biasing section, and a valve support formed from a single integrally formed part.

Additionally, amended independent Claim 22 requires, *inter alia*, a valve seat surface and a discharge valve member having a valve head, said valve head having a first surface sealingly engageable with said valve seat surface wherein said first surface defines a

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substantially convex surface, said first surface and said valve seat surface each being substantially shaped to define a portion of a sphere. Gannaway '076 discloses "frustoconical valve seat 192 on which mating frustoconical surface of head 194 of poppet 196 seals" (col. 13, lines 14-16). Dashner '465 discloses a spherical seating surface 38 and "conical" valve seat 20 (col. 3, line 58). These conical shapes are not substantially shaped to define a portion of a sphere.

For the foregoing reasons, Applicants respectfully submit that amended independent Claim 22, as well as Claims 23, and 25-27 which depend therefrom, are not obvious over Gannaway '076 in view of Dashner '465 and further in view of Lyford '205.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested. Specifically, Applicants respectfully submit that the application is in condition for allowance and respectfully requests allowance thereof.

In the event Applicants have overlooked the need for an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby petition therefore and authorize that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

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Should the Examiner have any further questions regarding any of the foregoing, he is respectfully invited to telephone the undersigned at (260) 424-8000.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: October 20, 2005

MATTHEW B. SKAGGS, REG. NO. 55,814

Name of Registered Representative


Signature

October 20, 2005

Date